Introduction

The client, an importer of essential Chinese cuisine ingredients is looking to expand into the United States of America, primarily setting up shop in <u>New York</u>. The company wants **insights into neighborhoods and Chinese restaurants in the city** so that it can develop a territorial strategy on considerations such as the size of the Chinese cuisine market in New York and the number of prime restaurants in the 5 boroughs (Manhattan, Queens, Brooklyn, The Bronx, Staten Island).

In knowing how many Chinese restaurants are in each borough, our client will be able to **identify, where best to set up stores to meet a large demand**. Additionally, it would also like to **identify which of these restaurants have the highest ratings**, as this in turn could be used for them to strategise sales and marketing growth through having a high-profile line of buyers.

This project will explore the location data of Ney York City and how we can help our client (the fintech company) develop their strategy based on the insights we have obtained.

Data

For this project we need the following data:

1. Restaurants data that contains list Locality, Restaurant name, Rating along with their latitude and longitude in New York City.
   - Foursquare API to obtain venues & details.
   - scraping from https://cocl.us/new_york_dataset to obtain Ney York City data set.

2. Nearby places in each locality of New York City. By using API's, we will get all the venues (Chinese restaurants) in each neighborhood.
   - Foursquare API

Methodology

1. Collect the New York data from dataset source using the NYC Public Dataset. From this we should be able to see the area with the most neighborhoods among the 5 boroughs of New York City, the shape of our location dataset, and how to further dissect and integrate it with the data found via Foursquare API calls.

2. Using the Foursquare API to find Chinese restaurants for each neighborhood and identify the ones with the best ratings using the following libraries:
   - pandas (data framing)
   - NumPy/ SciPy (mathematical calculations)
   - matplotlib (data visualization & plotting)
   - folium (geospatial visualization).

Results.
　　　　　*Refer to Capstone Project Notebook

Discussion

- Which of the 5 boroughs has the most neighborhoods?

Borough	Neighborhoods	Queens has the most neighborhoods (80), followed by Brooklyn (70), Staten Island (66), The Bronx (50) and Manhattan (40).
Queens	80	
Brooklyn	70	
Staten Island	66	
The Bronx	50	
Manhattan	40	
TOTAL	**306**	

- What is the number of Chinese restaurants in New York City?
  - There are a total of **177 Chinese restaurants** across the 5 boroughs.

- Which areas (boroughs & neighborhoods) have the most Chinese restaurants?

By boroughs		Brooklyn has the most Chinese restaurants (50), followed by Manhattan (45) and Queens (45), The Bronx (20) and Staten Island (17).
Borough	Chinese restaurants	
Brooklyn	50	
Manhattan	45	
Queens	45	
The Bronx	20	
Staten Island	17	
TOTAL	**177**	

By neighborhoods (Top 6)		Manhattan has the most Chinese restaurants (8 in Chinatown and 4 in Washington Heights), followed by Homecrest in Brooklyn (4), Little Neck in Queens (4), Bedford Park in The Bronx (3), and Bulls Head in Staten Island (3)
Neighborhoods	Chinese restaurants	
Chinatown, Manhattan	8	
Washington Heights, Manhattan	4	
Little Neck, Queens	4	
Homecrest, Brooklyn	4	
Bedford Park, The Bronx	3	
Bulls Head, Staten Island	3	

- Which of New York's five boroughs (Manhattan, Queens, Brooklyn, The Bronx, Staten Island) has the most acclaimed Chinese restaurants in New York City?

	NAME	NEIGHBORHOOD	BOROUGH	LIKES	RATING	TIPS
MOST LIKES	Buddakan	Chelsea	Manhattan	1483	9.0	521
HIGHEST RATING	Xi'an Famous Foods	Flatiron	Manhattan	212	9.1	43
MOST TIPS	Buddakan	Chelsea	Manhattan	1483	9.0	521

- What are the Top 10 Highly Rated Chinese Restaurants in the 5 boroughs (Manhattan, Queens, Brooklyn, The Bronx, Staten Island)?

NAME	NEIGHBORHOOD	BOROUGH	LIKES	RATING	TIPS
Xi'an Famous Foods	Flatiron	Manhattan	212.0	9.1	43.0
Buddakan	Chelsea	Manhattan	1483.0	9.0	521.0
Kings County Imperial	Lower East Side	Manhattan	77.0	9.0	10.0
Xi'an Famous Foods	Chinatown	Manhattan	105.0	9.0	29.0
Birds of a Feather	North Side	Brooklyn	352.0	9.0	75.0
East Wind Snack Shop	Windsor Terrace	Brooklyn	142.0	8.9	51.0
Café China	Murray Hill	Manhattan	1046.0	8.9	273.0
Málà Project	East Village	Manhattan	439.0	8.9	91.0
Decoy	West Village	Manhattan	336.0	8.9	105.0
Han Dynasty	Upper West Side	Manhattan	322.0	8.8	66.0
8 of the top 10 highly rated Chinese restaurants are in various neighborhoods across Manhattan					

- Where should our client set up shop among New York's five boroughs (Manhattan, Queens, Brooklyn, The Bronx, Staten Island)?

Primary Location: Manhattan	- 2nd Largest market size of Chinese restaurants in New York City (45). - Has the most Chinese restaurants (8 in Chinatown and 4 in Washington Heights) by neighborhoods across the 5 boroughs. - 8 of the top 10 highly rated Chinese restaurants are located within Manhattan neighborhoods. - This location satisfies the need to consolidate both a large and high-profile customer base in New York City.
Secondary Location: Brooklyn	- Largest market size of Chinese restaurants in New York City (50). - 2 of the top 10 highly rated Chinese restaurants are located within Brooklyn neighborhoods. - 2nd largest number of neighborhoods among the 5 boroughs. - This can perhaps accommodate to end-user consumption such as non-enterprise customers

Conclusion

We can say that our client has the potential to expand strategically if it were to consider penetrating the New York City market of Chinese restaurants through **Manhattan and/or Brooklyn**. This much is owed to the large number of high-profile Chinese restaurants in Manhattan and a substantial middle-to-low end market in both Manhattan and Brooklyn.

Distribution of goods can be given high priority in both areas as within Manhattan, the client can focus on partnerships and expanding across highly rated Chinese restaurants. Meanwhile, Brooklyn as a destination can be owed to the large size of Chinese restaurants and neighborhood distributions. This can serve to benefit the client through retail sales of goods to everyday consumers, apart from their primary target market which is Chinese restaurants.